

CLAIMS

What is claimed is:

1. An integrated accessory for a host device, the accessory including:
 - a media decoder operationally to decode an encoded media file;
 - a battery coupled to the media decoder operationally to provide power to the media decoder; and
 - a connector electrically and removably to couple the accessory to a host device,wherein the battery is coupled to the connector to allow the battery operationally to provide power to the host device.
2. The integrated accessory of claim 1 wherein the media decoder includes an audio decoder.
3. The integrated accessory of claim 1 including a media encoder to encode a media signal.
4. The integrated accessory of claim 1 wherein the battery, the media decoder, and the connector are integrated within a housing configured to be removably coupled to the host device.
5. The integrated accessory of claim 1 wherein the host device is a portable device.

6. The integrated accessory of claim 5 wherein the portable device includes any one of a group of devices including a portable computer, a mobile telephone, a personal digital assistant (PDA), a watch and a camera.

7. The integrated accessory of claim 1 including a power converter to convert power received from the battery to a voltage appropriate for the media decoder.

8. The integrated accessory of claim 1 wherein the connector provides a control interface whereby data communications are operationally facilitated between the media decoder and the host device.

9. The integrated accessory of claim 8 wherein the control interface includes an I²C interface.

10. The integrated accessory of claim 8 wherein the data communications include commands provided from the host device to the media decoder.

11. The integrated accessory of claim 10 wherein the commands include control commands to control operation of the media decoder.

12. The integrated accessory of claim 11 wherein the media decoder is a compressed media player, and the control commands are to control operation of the compressed media player.

13. The integrated accessory of claim 11 wherein the media decoder includes a digital signal processor, and the control commands are to control operation of the digital signal processor.

14. The integrated accessory of claim 10 wherein the commands include parameter set commands to set parameters of the media decoder.
15. The integrated accessory of claim 14 wherein the media decoder is a compressed media player, and the parameter set commands are to set parameters of the compressed media player.
16. The integrated accessory of claim 14 wherein the media decoder includes a digital signal processor, and the parameter set commands are to set parameters of the digital signal processor.
17. The integrated accessory of claim 10 wherein the commands include parameter read commands to read parameters of the media decoder.
18. The integrated accessory of claim 7 wherein the media decoder is a compressed media player, and the parameter read commands are to read parameters of the compressed media player.
19. The integrated accessory of claim 17 wherein the media decoder includes a digital signal processor, and the parameter read commands are to read parameters of the digital signal processor.
20. The integrated accessory of claim 1 wherein the connector is coupled operationally to provide compressed media data, received from the host device, for storage to a memory associated with the media decoder.
21. The integrated accessory of claim 8 wherein the media decoder operationally provides data to the host device via the control interface.

22. The integrated accessory of claim 21 wherein the data includes data concerning the media decoder provided responsive to a command received at the media decoder from the host device via the control interface.
23. The integrated accessory of claim 22 wherein the data is operationally to be displayed on a display screen of the host device.
24. The integrated accessory of claim 1 wherein the connector includes a media interface whereby for the media decoder operationally provides decoded media data to the host device.
25. The integrated accessory of claim 24 wherein the media data is in a digital form, and is operationally provided to a digital-to-analog converter (DAC) within the host device.
26. The integrated accessory of claim 1 including a digital-to-analog converter (DAC) coupled to the media decoder to receive decoded media data from the media decoder, and to generate an analog output based on the decoded media data.
27. The integrated accessory of claim 26 including an output jack coupled operationally to receive the analog output from the digital-to-analog converter.
28. The integrated accessory of claim 1 including a memory associated with the media decoder to store media data.
29. The integrated accessory of claim 28 wherein the media data is in a compressed format.

30. The integrated accessory of claim 29 wherein the compressed format includes any one of the MP3, AAC, Microsoft Windows Media, Qdesign Media, and Audible.com formats.
31. The integrated accessory of claim 28 wherein the memory is to store at least one decompression algorithm.
32. The integrated accessory of claim 28 wherein the memory includes a non-volatile memory to store the at least one decompression algorithm.
33. The integrated accessory of claim 32 wherein the non-volatile memory is to store the media data in addition to the at least one decompression algorithm.
34. The integrated accessory of claim 1 wherein integrated accessory is configured to receive a removable memory card to store media data.
35. The integrated accessory of claim 28 including an external interface coupled to the memory, the external interface to provide compressed media data for storage to the memory.
36. The integrated accessory of claim 35 wherein the external interface includes a USB interface.
37. The integrated accessory of claim 1 wherein the media decoder includes a programmable digital signal processor (DSP) core.
38. The integrated accessory of claim 37 wherein program code for the DSP is stored within a memory associated with the media decoder, and uploaded by the DSP core on power up.

39. A method to operate an integrated accessory for a host device, the method including:

utilizing a media decoder operationally to decode an encoded media file;

utilizing a battery coupled to the media decoder operationally to provide power to the media decoder; and

utilizing a connector electrically and removably to couple the accessory to a host device,

wherein the battery is coupled to the connector to allow the battery operationally to provide power to the host device.

40. The method of claim 39 wherein the media decoder includes an audio decoder.

41. The method of claim 39 including utilizing a media encoder to encode a media signal.

42. The method of claim 39 wherein the battery, the media decoder, and the connector are integrated within a housing configured to be removably coupled to the host device.

43. The method of claim 39 wherein the host device is a portable device.

44. The method of claim 39 including utilizing a power converter to convert power received from the battery to a voltage appropriate for the media decoder.

TECHNICAL FIELD

45. The method of claim 39 including utilizing the connector to provide a control interface whereby data communications are operationally facilitated between the media decoder and the host device.
46. The method of claim 45 wherein the data communications include commands provided from the host device to the media decoder.
47. The method of claim 46 wherein the commands include control commands, the method including controlling operation of the media decoder utilizing the control commands.
48. The method of claim 47 wherein the media decoder is a compressed media player, and the control commands are to control operation of the compressed media player.
49. The method of claim 47 wherein the media decoder includes a digital signal processor, and the control commands are to control operation of the digital signal processor.
50. The method of claim 46 wherein the commands include parameter set commands to set parameters of the media decoder.
51. The method of claim 50 wherein the media decoder is a compressed media player, the method including setting parameters of the compressed media player utilizing the parameter set commands.

52. The method of claim 39 including providing compressed media data, received from the host device, via the connector for storage to a memory associated with the media decoder.

53. The method of claim 39 including providing data from the media decoder to the host device via the control interface.

54. The method of claim 53 wherein the data includes data concerning the media decoder, the method including providing the data responsive to a command received at the media decoder from the host device via the control interface.

55. The method of claim 39 including providing decoded media data to the host device via a media interface included within the connector.

56. The method of claim 55 wherein the media data is in a digital form, and the method including providing the media data to a digital-to-analog converter (DAC) within the host device.

57. The method of claim 39 wherein the integrated accessory includes a digital-to-analog converter (DAC) coupled to the media decoder to receive decoded media data from the media decoder, the method including generating an analog output based on the decoded media data within the integrated accessory.

58. The method of claim 57 wherein the integrated accessory includes an output jack, the method including providing the analog output from the digital-to-analog converter to the output jack.

59. The method of claim 39 wherein the integrated accessory includes a memory, the method including storing at least one decompression algorithm in the memory.

60. The method of claim 59 including storing media data in the memory in addition to the at least one decompression algorithm.
61. The method of claim 59 including storing program code for the media decoder within the memory, and uploading the program code to the media decoder on power up.
62. A method of manufacturing an integrated accessory for a host device, the method including:
- providing a media decoder operationally to decode an encoded media file;
- coupling a battery to the media decoder operationally to provide power to the media decoder; and
- coupling the battery to a connector, the connector electrically and removably coupled to the accessory to a host device,
- wherein the battery is coupled to the connector to allow the battery operationally to provide power to the host device.
63. The method of claim 62 including coupling the battery to a media encoder, the media encoder to encode a media signal.
64. The method of claim 62 including accommodating the battery, the media decoder, and the connector within a housing configured to be removably coupled to the host device.

65. The method of claim 62 including coupling a power converter to the battery, the power converter to convert power received from the battery to a voltage appropriate for the media decoder.
66. The method of claim 62 including coupling the connector to a memory, associated with the media decoder, of the integrated accessory, the connector operationally to provide compressed media data, received from the host device, for storage to the memory.
67. The method of claim 62 including coupling a digital-to-analog converter (DAC) to the media decoder, the DAC to receive decoded media data from the media decoder, and to generate an analog output based on the decoded media data.
68. The method of claim 67 including coupling an output jack to receive the analog output from the digital-to-analog converter.
69. The method of claim 62 including configuring the integrated accessory to receive a removable memory card to store media data.
70. The method of claim 62 including coupling an external interface to a memory of the integrated accessory, the external interface to provide compressed media data for storage to the memory.
71. The method of claim 70 wherein the external interface includes a USB interface.
72. An integrated accessory for a host device, the accessory including:
 - first means operationally for decoding an encoded media file;

second means, coupled to the first means, for operationally providing power to the first means;

third means for electrically and removably coupling the accessory to a host device,

wherein the second means is coupled to the third means to allow the second means operationally to provide power to the host device.

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